

Appl. No. : 09/211,950
Filed : December 15, 1998

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following remarks.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Response to Rejection of Claims 1-12 and 29 Under 35 U.S.C. 112, first paragraph

The Examiner rejected Claims 1-12 and 29 Under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement.

With regard to Claim 1, the Examiner argues that the recitation "wherein said active network server grants access to said medium by sending a first token to a first network node, said first network node relinquishes access to said network medium by returning a second token to said active network server, said active network server grants access to said medium by sending a third token to a second network node, and said second network node relinquishes access to said network medium by returning fourth token to said active network server" is not supported.

According to the specification, the active network server grants access to the medium by sending a first token to a first network node (*see e.g.*, Figure 7, *see also* page 26 at lines 4-7 under the heading Centralized Token-Passing (Polling), "When the system is awake, it is desirable to give each node included in the lineup card (via the spitting process) a deterministic time slot in which it can access the medium 100. It is further desirable to give each node the same opportunity to transmit on a busy medium 100;" *see also* page 26 at lines 14-16, "In CTP, the active network server node is responsible for ensuring that a token exists, that every node needing the token gets it, that sleeping nodes can wake-up and receive the token, and that the tokens are distributed fairly in a deterministic fashion;" *see also* page 26 at lines 21-22 "During system activity, the active network server is responsible for polling each client node in the lineup card. . . ."; *see also* page 27 at lines 7-8 "[t]he token is given to the next node obtained from the lineup card.").

Further, according to the specification, said first network node relinquishes access to said network medium by returning a second token to said active network server (*see e.g.*, page 29 at lines 21-28, "The token packet 100 is sent to a directly addressed node, and solicits either payload type packet. Nodes not requiring attention should simply DACK (with the status field set

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to 0x03), meaning they don't have anything to say and will not be using the token. Client nodes should invoke a token (through the LIP process) before transmitting onto an active network. As long as a node continues to use the token, the active network server will continue to hand it a token," see also, page 30 at lines 17-19, " . . . DACK packets sent back to the "active network server" (by the requesting node) relinquish control back to the 'active network server" see also page 34 at lines 12-14 "The Token and DACK command packets are used to transfer access rights to the medium 100, and terminate a sequence where the "active network server" temporarily releases control of the medium 100 to another node.")

Further according to the specification, said active network server grants access to said medium by sending a third token to a second network node (*see e.g.*, pages 26-34 as above), and said second network node relinquishes access to said network medium by returning fourth token to said active network server (*see e.g.*, pages 26-34 as above).

Thus, Claim 1 is fully supported by the specification. Applicants have amended Claim 1 to clarify the claimed invention. Claims 2-12 depend from Claim 1, and are similarly supported by the specification.

According to the specification, the active network server sends a token to an active client node to grant access to said medium, and wherein said active client node returns an acknowledgement to said active network server to relinquish control of said medium, as recited Claim 29 in (*see e.g.*, pages 26-34 as described above).

Accordingly, Applicants assert that Claims 1-12 and 29 are supported by the specification, and Applicants request allowance of Claims 1-12 and 29.

Response to Rejection of Claims 1-2, 4-9, 12, 28-36, and 39 Under 35 U.S.C. 103(a)

The Examiner rejected Claims 1-2, 4-9, 12, 28-36, and 39 Under 35 U.S.C. 103(a) as anticipated by U.S. Patent No. 5,878,221 to Szkopek et al ("Szkopek") in view of U.S. Patent No. 4,491,946 to Kryskow et al. ("Kryskow"). Szkopek and Kryskow both teach a token ring network where the token is passed from node to node around a virtual ring.

Szkopek teaches, "a token ring of sequence Node1, Node2, Node4, Node3, Node5, has been constructed by instructing Node1 to pass the token to Node2, Node 2 to pass the token to Node4, Node4 to pass the token to Node3, Node3 to pass the token to Node5, and Node5 to pass the token to Node 1." (Column 35 at lines 28-33). Kryskow teaches a ring network where

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stations are listed on a “token list (loop or ring) of which stations periodically obtain ownership of the token” (see e.g, column 3 at line 24, Figure 1, etc.).

Kryskow teaches, “[f]igure 1 is a diagrammatic representation of a local area network communication system according to the present invention, illustrating the arc of control whereby three stations are related to each other by FROM, TOKEN OWNER, and TO . . .” (see column 6, at lines 35-40, emphasis added). Further, “FIG. 4 is a diagrammatic representation of a group of stations linked together in a loop of control (a token list) wherein the token is passed from one station to another.” (see column 6, at lines 56-59, emphasis added). Thus, in Kryskow, the token list describes a loop. In Kryskow, slave stations have no mechanism of their own access of the token and are not on the token list.

By contrast, Applicants teach a system where an active server polls clients based on a lineup card. The lineup card does not describe a loop, but rather a list of client nodes that are serviced by an active server node. The client nodes do not pass a token to one another around a ring or loop structure. Rather, the active server polls the client nodes by passing a token serially to each node listed on in the lineup card. Client nodes can communicate between themselves, but do not pass the token in a ring. The active network sever controls the token.

Thus, no combination of the cited references yields the claimed invention.

Regarding Claim 1, the cited prior art does not teach or suggest listening to a network medium to determine if the medium is active or inactive, establishing an active network server if the medium is inactive; and using centralized token passing for access to a the medium when the medium is active, the centralized token passing controlled by the active network server, wherein the active network server grants access to the medium by sending a first token to a first network node, the first network node relinquishes access to the network medium by returning a first response to the active network server, the active network server grants access to the medium by sending the second token to a second network node, and the second network node relinquishes access to the network medium by returning second response to the active network server.

Regarding Claim 2, the cited combination art does not teach or suggest the method of Claim 1, wherein the active network server maintains a lineup card that lists one or more active client nodes.

Regarding Claim 4, the cited combination does not teach or suggest that the selected node is allowed to transmit data on the network medium only when the selected node has the token.

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Regarding Claim 5, the cited combination does not teach or suggest that the selected node is removed from the lineup card when the node has been inactive for a period of time.

Regarding Claim 6, the cited combination does not teach or suggest that a new client node requests insertion on the lineup card by using spitting on the bus algorithm.

Regarding Claim 7, the cited prior art does not teach or suggest that a presence of a datagram is detected by matching a specified preamble and length sequence.

Regarding Claim 8, the cited prior art does not teach or suggest, in prior art with Claim 1, that access to the medium is provided by a media access control layer.

Regarding Claim 9, the cited prior art does not teach or suggest that the media access control layer provides control structures to implement a spare receive buffer large enough to hold a Media Access Control Header.

Regarding Claim 12, the cited prior art does not teach or suggest a preferred server node becomes the active server node in response to a wake-up algorithm.

Regarding Claim 28, the cited combination art does not teach or suggest establishing an active network server, building a lineup card, and using centralized token passing for access to the medium when the medium is active, the centralized token passing controlled by the active network server, the active network server granting access to the medium by polling network nodes listed on the lineup card.

Regarding Claim 29, the cited combination art does not teach or suggest the method of Claim 28, wherein the active network server sends a token to an active client node to grant access to the medium, and wherein the active client node returns an acknowledgement to the active network server to relinquish control of the medium.

Regarding Claim 30, the cited combination art does not teach or suggest the method of Claim 28, wherein the active network server passes a token to a selected client node, the selected client node being one of the one or more active client nodes listed on the lineup card.

Regarding Claim 31, the cited combination art does not teach or suggest the method of Claim 30, wherein the selected node is allowed to transmit data on the network medium only when the selected node has the token.

Regarding Claim 32, the cited combination art does not teach or suggest the method of Claim 30, wherein the selected node is removed from the lineup card when the node has been inactive for a period of time.

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Regarding Claim 23, the cited combination art does not teach or suggest the method of Claim 30, wherein a new client node requests insertion on the lineup card by using spitting on the bus algorithm.

Regarding Claim 34, the cited combination art does not teach or suggest the method of Claim 28, wherein a presence of a datagram is detected by matching a specified preamble and length sequence.

Regarding Claim 35, the cited combination art does not teach or suggest the method of Claim 28, wherein access to the medium is provided by a media access control layer.

Regarding Claim 36, the cited combination art does not teach or suggest the method of Claim 35, wherein the media access control layer provides control structures to implement a spare receive buffer large enough to hold a Media Access Control Header.

Regarding Claim 39, the cited combination art does not teach or suggest the method of Claim 28, wherein a preferred server node becomes the active server node in response to a wake-up algorithm.

Accordingly, Applicants assert that Claims 1-2, 4-9, 12, 28-36, and 39 are in condition for allowance, and Applicants request allowance of Claims 1-2, 4-9, 12, 28-36, and 39.

Response to Rejection of Claims 10 and 37 Under 35 U.S.C. 103(a)

The Examiner rejected Claim 110 Under 35 U.S.C. 102(e) as anticipated by Szkopek and Kryskow in view of U.S. Patent No. 5,925,105 to Hales et al.

Regarding Claims 10 and 37, the cited combination does not teach or suggest sending a BUSY response from a receiving node to a transmitting node when the receiving node is swamped with previous packet requests.

Accordingly, Applicants assert that Claims 10 and 37 are in condition for allowance, and Applicants request allowance of Claims 10 and 37.

Response to Rejection of Claims 11 and 38 Under 35 U.S.C. 103(a)

The Examiner rejected Claims 11 and 38 Under 35 U.S.C. 102(e) as anticipated by Szkopek and Kryskow in view of U.S. Patent No. 5,727,002 to Miller et al.

Regarding Claims 11 and 38, the cited combination does not teach or suggest issuing an auto-announce packet when a new node enters the network.

Accordingly, Applicants assert that Claims 11 and 38 are in condition for allowance, and Applicants request allowance of Claims 11 and 38.

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Objection to Claim 3

The Examiner objected to Claim 3 as being dependent on a rejected base Claim. The Examiner states that Claim 3 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Applicants have rewritten Claim 3 in independent form including all of the limitations of the base claim and any intervening claim. Accordingly, Applicants request allowance of Claim 3.

Summary

Applicants assert that Claims 1-12 and 28-39 are in condition for allowance, and Applicants request allowance of Claims 1-12 and 28-39. If there are any remaining issues that can be resolved by a telephone conference, the Examiner is invited to call the undersigned attorney at (949) 721-6305.

Respectfully submitted,
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